

Vol. XI.

No. 5.

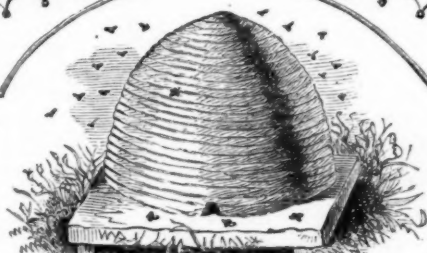
MAY, 1875.



THE

AMERICAN

BEE JOURNAL



A MONTHLY MAGAZINE
DEVOTED EXCLUSIVELY TO BEE CULTURE.

Established 'in 1861, by the late Samuel Wagner.

AND

The National Bee Journal,

CONSOLIDATED.



Cedar Rapids, Iowa:

THOS. G. NEWMAN & SON,
PUBLISHERS.

THOMAS G. NEWMAN & SON, PRINTERS, CEDAR RAPIDS, IOWA.

THE AMERICAN BEE JOURNAL.

Contents of this Number.

Seasonable Hints.....	97
Bees and Centennial Exposition.....	98
Voices from among the Hives.....	99
Our Plan of Wintering.....	101
Marketing Honey.....	102
Tall and Shallow Frames.....	102
Missouri Bee Killer.....	103
Honey Granulating.....	103, 114
To Double the Capacity of Hives.....	104
Size of Hives.....	104
The Hive I Use.....	104
Reply to Dadant.....	105
How to make Hives.....	105
Closing Word.....	106
Foul Brood.....	106
Getting Honey in Boxes.....	107
Patent Hives and Venders.....	109
Enemies of the Bee.....	110
How I Succeeded.....	110
Wax Melting.....	111
Report of my Apiary.....	111
Bee Items.....	112
New System of Bee-Culture.....	112
Austin, Texas.....	113
Longevity of Bees.....	113
Introducing Queens.....	113
My Report.....	114
How I Wintered.....	115
Bee Lines from Texas.....	115
Historical Notes.....	116
Notes and Queries.....	117

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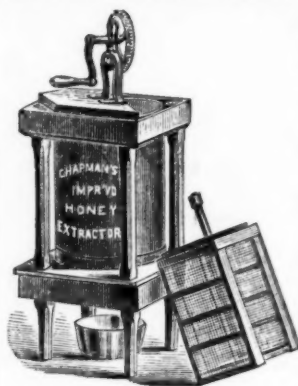
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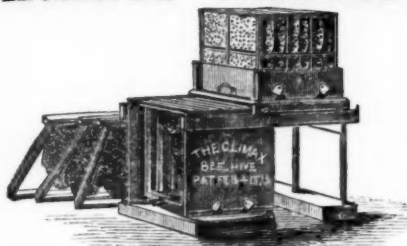
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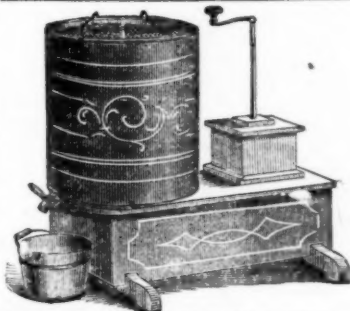
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number, with beautiful life, like cro-mo of Italian bees and honey plants (price 50 cents), sent free with the Magazine five months for 50 cents. Address W. B. COBB, Publisher, 75 Barclay Street, New York.

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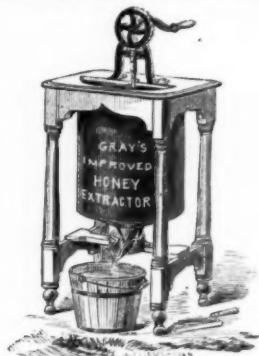
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1875.

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AMERICAN BEE JOURNAL,

DEVOTED EXCLUSIVELY TO BEE CULTURE.

Vol. XI.

CEDAR RAPIDS, MAY, 1875.

No. 5.

American Bee Journal.

W. F. CLARKE.
MRS. E. S. TUPPER, } EDITORS.

Seasonable Hints.

In this month, it is often best, if rapid increase is desired, to divide colonies. If the bees have been encouraged in brood rearing by feeding, and the heat of the hive economized, the bees are strong now—whether the season be late or early. We do not find bees, managed as we advise, dependent on early seasons.

We would advise all whose colonies are strong, and who desire to increase numbers as fast as possible, to commence in this month making new colonies. We would not do it in such a way as to weaken any hive materially. A comb of brood may be taken from one, a comb containing stores from another, and bees from a third. If a queen can be provided for every newly made colony, or a queen cell nearly ready to hatch and empty comb is at hand, the increase may be very rapid and with no danger of failure.

Those who wish to start nucleus hives, can do it best in this month, in this latitude.

There are various ways of doing this. The best one is this: Take a good Italian queen from the hive to which she belongs and put her in some other hive, from which the queen has been removed; with the usual precautions.

The hive left queenless will at once build queen cells, and at this season of the year, a number may be expected. Leave the hive undisturbed until about the eighth

day, then have in readiness several small hives each made to contain three or four frames, the same size as your large hives. Open your hive, ascertain how queen cells they are, and divide its contents among these small hives—putting in each a comb, containing at least one cell—more if you choose. Divide the brood combs and store combs among the small hives and if necessary supply one or more from other hives. Then take the old hive entirely away and set the small hives containing the frames of it close together where the old one stood, the entrance facing the *opposite way*. The bees disturbed by the unfamiliar appearance of things, will find the small hives, and as each has a cell and brood, they will soon settle to work. Care must be taken before night to see that each *small* hive has enough. If one has more than its share, change its place with that of a weaker one. You will then have two, three or four small hives in the place of one, and can keep them all the season rearing queens, or unite them again into one colony after they have served their purpose. There are other ways of starting a nucleus, which we will give hereafter.

Those who use surplus boxes will do well to put them on all strong colonies in this month; though in most localities, bees do better in them before June.

A strong colony of bees has been known to build one hundred square inches of comb in twenty-four hours; at that rate over sixty sheets of comb a foot square could be constructed in three months. The editor of the *Annals of Bee Culture* has had a report of a swarm that built nine sheets of comb ten by thirteen inches in ten days.

Office of the Iowa Board of Centennial Managers.

This is to certify that Mrs. Ellen Tupper of Des Moines Polk Co., being an expert in such articles as are enumerated in Group No. 34 of our Classification of Iowa Products, is duly appointed to act as Group Secretary in charge of her specialty, viz :

The Bee-Keeping Industry of the State, subject to such instructions as our Board may from time to time give in a written form.

Signed this 16th day of April 1875, and attested by the Seal of our Corporation.

ALEX. SHAW, S. H. MALLORY.

Sec'y. President.

I, C. B. Carpenter, Governor of Iowa, hereby indorse the foregoing appointment, this 16th day of April 1875.

C. C. CARPENTER.

Centennial Exposition.

COMMENCING APRIL 19, AND ENDING OCT. 19, 1876.

The undersigned having been appointed, by the Iowa Board of Centennial Managers, Secretary of Group No. 34, accepts the appointment with the hope that every bee-keeper in the State will aid her in the work, by preparing for the exhibition any hives, extracts, bees, queens, or anything pertaining to the industry within reach. Also specimens of all honey-producing plants and seeds thereof which may be found in any portion of the State of Iowa, for exhibition at the coming celebration of One Hundredth Anniversary of the Nation, to be held at Philadelphia, Pa., 1876, I have the honor to request your co-operation in completing this Group, by the preparation and contribution of articles properly belonging within the scope thereof.

Any aid or information will be cheerfully furnished on application. As the Secretary of this Group is also a member of the committee appointed by the National Bee-Keepers Association, applications from any part of the country will be in order.

All articles shipped to my care will be properly labeled and transmitted to the Exposition, under the care and direction of the State Board of Centennial Managers. Such articles as the individual exhibitor may desire can be shipped direct to the care of the Director General of the Exposition, Philadelphia, Pa., under such rules as the Director General may prescribe. All persons who desire to be exhibitors will be supplied with blank applications for space upon applying

to the undersigned. Applications must be made to the Director General of the exposition. For the purpose of keeping a record of Iowa applications, they will be signed in duplicate, one of which will be forwarded to the Director General, Philadelphia, and one to the Secretary of Iowa State Board of Centennial Managers, Des Moines, Iowa.

Trusting that State and local pride will induce you to give us your hearty co-operation I shall expect, without further solicitation, to secure from you, on or before the 1st day of December, 1875, a specimen of such articles as above enumerated, all of which will be duly acknowledged, and ordinary care exercised; but the loss of property by the accidents of transportation, by fire, or by the dispensations of Providence, will in no wise subject the undersigned to damages.

Respectfully,

ELLEN S. TUPPER.

Sec'y. Group 34.

Des Moines, Iowa.

From the Practical Farmer.

Uses of Wool in the Apiary.

For the last four years we have used wool quite largely for various purposes in our apiary. We use nothing else for stopping up our queen cages, rolling it for this purpose into a tight wad. The bees cannot gnaw it away, and seldom propolise it. We shut up all our nuclei, when first formed, with wool. It can be crowded into place in a moment, admits air, and is easily removed. If we wish for any purpose to shut up a hive, we use wool. In the working season, we keep one "pocket full of wool," and know nothing of the vexations we experienced when using wire-cloth. Occasionally a few bees are caught in the fibres of the wool, but they are for the most part very shy of it, and are quite indisposed to commit *felo de se*, by hanging themselves in its meshes. Robbers will very quickly retreat from a hive well wooled. If we use the words to wool and unwool a hive or nucleus, instead of to shut up or open the entrance, our readers will understand what we mean.

L. L. LANGSTROTH.

PERSONAL.—This heading, over my signature, may remind some, of my personals in the AMERICAN BEE JOURNAL in 1872. With no intention of reviving past animosities, I desire to say that soon after these personals appeared, I regretted some things in them. For the first time in my life, instead of a statement of facts with what seemed to me the necessary conclusions from them, I used bitter epithets and invectives. Coming from a man of my age and profession this was the less excusable. Perhaps

I never lost so good an opportunity of showing the best way of conducting such controversies as we deem necessary in defence of our rights.

About two years ago I personally expressed to Mr. H. A. King, my regret for the invidious comparisons in which I had indulged, and my intention of withdrawing them as publicly as they were made. Able again to use my pen, I am glad to carry out this intention. If my example has encouraged the acrimoniousness with which questions have been discussed, and controversies carried on among American Bee Keepers, I hope this personal may contribute somewhat to soften such needless asperities.

April 23rd, 1875. L. L. LANGSTROTH.

Voices from Among the Hives.

H. GOODLANDER, Leesburg, Ind., writes: "Bees can be wintered just as safely, and more easily than any other stock. The material from which a hive is made, has a great influence on the health of the bee."

ELIAS HERSHEY, Leaman Place, Pa., writes: "I wintered 27 stands out of doors, without protection, except blankets on top of frames, and they all came out strong, and are ready for work as soon as the blossoms come."

R. R. MURPHY, Fulton, Ill., writes: "About March 20th, some one sent me a registered letter, but the Post Office was burglarized on the 25th. The safe blown open, and the building fired. Nothing was saved. This is the reason why I have not been able to answer that letter."

JOHN DIVEKEY, Aurora, Ill., writes: "I put my bees—43 swarms—in a basement on the 15th of Nov. They came out all strong and healthy about the middle of March without loss. They had no flight for 4 months. They were carrying natural Pollen on the 4th of April. The winter here was very severe, but the opening of Spring is exceedingly favorable. Long may your valuable Bee Journal live and prosper."

DR. N. P. ALLEN, Smith's Grove, Ky., writes: "I have succeeded in wintering my bees in Langstroth hive on summer stands without losing a single stock. My bees are in fine condition and have been gathering from the fruit blossoms for the last week. I had eleven in top story, one week ago. I have four new idea hives. I like them very much. I see by the Journal that they are not so regarded by some, but my experience is that we can raise more bees by inserting empty comb in the center of brood-nest. Can enlarge the brood-nest to double the size, it is ordinary, and that they will come out in the spring with more bees than the Langstroth hive, and with more honey. I hope to be able to make a good report of this season's operations."

H. M. NOBLE, Mount Pleasant, Iowa, writes: "My bees have wintered better than for the past three winters. I had 20 swarms last fall. I put 5 of the poorest in a cave and one died. I put 15 in the cellar, and as some of them got the dysentery I made a box 3½ ft long and put a window sash in one end, and one on the top, leaving one of the sash that I could open so that I

could put my arms in and take off the quilt or honey board. I took some of the frames out and set them on the out side of the hive and cleaned out the dead bees, &c. The most of my bees came through the winter healthy. I got a queen one year ago last July; said to be from an imported mother. I think she is a regular Egyptian from what I have read about them. They have the grit; they work well, breed well, and sting like a demon."

JAS. B. WILSON, Des Moines, Iowa writes: "The winter that has just passed, has been a very hard one in Iowa. I had 4 colonies of bees to go into winter quarters last fall. My bees have been on their summer stands for the past 4 winters, and I have not lost any by disease or freezing, during that time. During the winter, any day that the sun shined or was a little warmer than other days, they would fly out as in summer."

I have not had to feed them this winter or spring, as they laid up enough feed in the lower combs for their own use during the whole winter. I have used the "Finn Forus Wall Hive," ever since I commenced keeping bees. I am not afraid to recommend it to apiarians, as the only one that their bees can be safe in, during the summer or winter. Each colony is so strong in the spring and summer that moths or robbers dare not venture near them."

WM. H. S. GROUT, Poland Center, N. Y., writes:—"The following is what I have done the past season with five, 32 (Kidder) frame Gallip hives and Italian bees:

No.	May 30.	June 11.	June 21.	June 27.	July 8.	July 9.	July 18.	July 25.	Aug. 4.	Total per Hive.
1	7½	3½	20¼	31¼	35¼	53	52¼	73	27¼	304
2	7½	3½	12½	26½	37	36½	34	60	24½	242
3	6¼	4¼	18½	32¼	43¼	44	31	90	27	296½
4	0	2	16	23½	19¼	48	38	65	18	229¼
5	6	4	19	44½	45¼	43¼	35	60	13	270½
T.	27	17½	85¼	150	180	225	190	348	110	1,342
	Spring Honey.		Raspberry and Clover.					Basswood.		

Average yield per hive, 268 2-5 lbs.

I think the Gallip hive is just the thing to work bees in, for extracted honey. It is more convenient than two-story hives, and I think will yield better. When you get all the light honey, you have swarms that will gather enough fall honey to winter on, and strong enough to winter on their summer stands. At least that is my experience. Mine having gathered enough for winter for the past three years. The supply is principally from smart-weed. The long hives are not humbug, practically, if my experience amounts to anything; and I believe that I can get more honey from them than I can from the same number of combs in small hives. If 'Eccentric' will try them in a good season he may think better of them, and conclude that they are not such a humbug after all. He should remember that strong swarms gather the honey, and stand a better chance to winter than if they were divided up."

ED. WELLINGTON, Rivertown, Iowa, writes:—"Our long and severe winter is now past. The bee-keeper now knows how many of his stocks of bees has been consumed by it. I came out better with mine than I expected, and as good as the

most of my neighbors. I lost two very light stocks that only had a pint of bees or less; the loss of which I lay to not having upward ventilation—and another lately. We had a fine warm spell. The bees flew finely, then came a severe cold snap, which lasted a week, when it again turned warm. I found one of my weak stocks had clustered in empty comb, away from their supplies, and had passed in their cheeks, and were dead. Making a total of 4 out of 23. Those that I had down 5 feet in the ground covered over with boards and straw, froze as bad as those that I had on top of the ground surrounded with straw. I know of 19 stocks that were wintered out doors, ten with tight honey boards on, and nine with quilts. The result was, that all with the quilts on were alive, and nine out of the ten that had on tight honey boards were dead. The other was a very strong stock in the fall, now it is very weak and troubled by robbers. My bees are now working finely on rye flour."

ARCHIBALD SMITH, Roswell, Cobb Co., Georgia, writes:—"I wrote you a few notes of experience. I *survived* the summer with two hives, large size, single story, movable frames, about a quart of bees in each, but little honey or comb, and had to take out much comb infested by moth. So little honey was made, that I had to feed; and looked into the hives the first week in January, when I found but from 4 to 6 lbs. honey in each. (The winter here has been mild enough to afford the bees a flight every week or two). About the 15th of June, I put a little sugar syrup into each hive, and soon finding great activity among the bees, I examined them and found that the bees from the larger hive were *robbing* the others; but the *peculiarity* was, that there was *no fighting* only great activity, but as there were no flowers, I looked closely until I found they were passing from hive to hive. I have continued to feed; but leave only one hive open at a time. The question here arises, and I want your readers to investigate; does not this account for much loss, in the spring, of swarms just put out of winter quarters, before there are flowers enough to supply the large demands of breeding? And does it not also account for the great increase of some hives?

JOHN HUGH McDOWELL, Red Fork, Ark. writes: "Bees do well here, never die in winter from cold. I have had five natural swarms this spring from one hive, other hives all sent out more or less swarms. I would like to have a partner who understands bee culture, would *give* him a half interest. I use Adair's and Novice's hives."

ALFRED CHAPMAN, New Cumberland, W. Va., writes: "It has been exceedingly cold, but my bees have wintered very well on their summer stands. I have a shed roof over them and packed straw all around them, but in front. But they consumed much more honey than those in a cellar or house."

In the spring of 1871, we bought a farm remote from neighbors a mile or nearly so and on it was a swarm of bees which the owner did not care to remove, never having received any benefit from them, and in a year or so they were given to us. They were in an old decayed box hive, they

swarmed the first season in my absence, a neighbor hived them in another old box hive, and in the following spring they were all dead.

We put our new swarms into an old fashioned hive, just to make trial and see if they would live and thrive. It was in June, I think. If they lived through the winter, we intended to get a moveable frame hive. Heard of Kidden, of Burlington, Last spring all were lively in both hives, and I sent for a patent hive, but they swarmed before it came to hand and I was obliged to put them in an improved, but still a box hive. I had not *learned* that I *must not* hive them on the stand. After they seemed quiet, I went out to see, and the hive was empty. Fortunately, they had gone home, instead of to the woods, as our swarm did the previous year. Now what shall we novices do next. My right hand was large enough for two, from four stings though gloved, bee-veiled, &c., for the little hive was full, and the weather hot. We studied and mustered courage to raise the hive and set another under it, and they accepted it and went to work in it. They built combs and it seemed to me as though were two separate families or swarms. The first year I had one ten pound box of honey, last year probably between forty and fifty lbs. of very nice honey. One box still remains in the chamber of one hive. They are in the open field protected partially by boards and pine boughs. MARY R. SANDERSON.

We send you the January JOURNAL and think you will find it just what you need. We print your letter without your leave, because we like to show others interested how one more went to work. You are on the right track and we hope will not loose your bees. We know if you read the JOURNAL you will learn how to manage them so as not to dread their sting, but on the contrary, will enjoy working with them.

Your bees that "went home" did not do so because "you hived them on the stand," but they lost their queen and therefore returned to their old hive. Putting another hive under the old one, was the best thing you could do under the circumstances.

☞ We have a lot of Adair's Annals of Bee Culture for 1870 slightly damaged, on hand—which we will sell for 10 cents each, Postage 4 cents.

☞ The Southern Ky., Bee-Keepers' Association will meet at the residence of R. A. Alexander, on Monday the 19th of May next, and all persons interested in the culture of the honey-bee are invited to be present. We hope some of our Northern Brethren who are posted in Scientific Bee-Culture will attend or send us communications, bee-hives, honey-boxes, &c., for exhibition. They will be cared for and put upon exhibition by the President.

H. W. SANDERS, Secretary. DR. N. P. ALLEN, President.

Correspondence.

Our Plan of Wintering.

As many of our Bee Keeping friends in different parts of our country are in many cases, yearly being made sorrowful through the sad inroads made upon their pets—the beautiful Italians—and we, having been *blessed* by a course of management, which has not only given us our number of colonies in full, in the beginning of spring, in good shape, but has carried them safely through the *severe* trial put upon them, by our cold and backward springs, of which so many have cause to remember, and hoping to benefit some one or more of our suffering friends, we submit our plan of procedure, to-wit:

In the first place, our bees are wintered in the cellar, under the main part of the house, over which there is a fire but very few times during winter. Cellar 18x22, in clay; bee room, 9x12, partitioned off in one corner, between joists over-head we have stuffed with straw, held in place by a few lath tacked on, the partitioned side is also studded and packed with straw in same manner, while one side and end are stone wall, over all the portion stuffed with straw, we have tacked a covering of building paper, shelves arranged around the sides and one end, none coming *nearer* than two feet of cellar-bottom, we thus, you will see, have provided an absorbant, by which all dampness is absorbed. As a consequence, our rooms are as dry as a flint. Here let us say, were we going to arrange *an other room* in the cellar, for bees, would manage to have as *little* of the *stone-wall* in it as possible, for we notice, is there an uneasy colony, or one the least inclined to be diseased, or one weaker than the average in Spring 'tis sure to be, or have come from the stone-wall side, and whenever we were compelled to have a portion of it, would arrange to not let our hives come nearer than 12 to 18 inches. So much for cellars.

About 10th to 15th of Sept., or immediately after buckwheat season closes, which winds up the honey season with us. (During the flow of fall honey, should you not be sure your bees would store enough for their winter's use, do not put off supplying them with a safe amount, either honey or syrup, later than above date as the earlier they get their stores, the sooner will they cap themselves and as a consequence the better will they winter.) We carefully examine each stock and esit-

mate their stores and if any are short, immediately feed them on Coffee A. sugar syrup made 20 pounds to the gallon of water, until they have from 20 to 30 lbs. stores each, according to strength of colony. They are then left to themselves, to be as quiet as may be. As the cool nights of last Sept. and Oct. come on, we contract the entrance to keep them warm. Early in Oct., choosing a day in which the bees are flying lively, we open a hive and set frames in an empty one previously provided for the purpose, then proceed to tack a quilt (made of sheeting lined with a thin layer of batting, quilts made for summer use,) on each of the two sides of the hive, doubling over and to the inside, at top of hive, sufficient of the quilt to let it just reach bottom on back side, and elevated enough on front to allow the bees free use of entrance, use three 8 oz. tacks at top and one at bottom, driving only half way in, so they may be easily removed in taking off quilts. Your hive is now ready for the bees, which return, and when returning examine and see if they have as many as two empty combs in center of hive, if not supply them, placing a frame of honey or syrup between them. If they have unsealed stores, see that they are placed nearest the bees and the sealed removed toward end of hive, by this means the unsealed stores are first used up and you will have no soured stores to give your bees that fatal disease in spring, known as dysentery. Spread combs a little in center of hive, about where clustering is, and if necessary so to do, remove 1 to 3 frames, by a half inch strip across the top of frame and place on quilt, and your bees are ready to let alone, until time of setting away. You will see upon replacing bees in hive, after lining, that the frames do not go to place as easily as before, but by placing one end in position you can easily bring other to place, when you will find your frames are as firmly held to place as though made close fitting. By this process of lining, we not only do away with that great objection to frame hives for winter use, the dead air space around frames, chilling bees and combs, but we enclose our bees in a nice warm nest, surrounded with material which absorbs all dampness and keeps them as dry as can be. The first cold snap in Nov., we prepare to set them in winter quarters by setting them off bottom board, and cleaning that of all litter, and placing a frame, made of inch stuff, in square, on bottom board, then place, have back resting on the frame, take up bottom brood and gently carry them to their place in cellar, setting brood and hive on shelf, close door, and above all let them alone,

only occasionally looking in at door to see that the rats or any thing else have disturbed quilts. Our cellar has no ventilation, except what it gets when members of the family go into it for vegetables, mercury usually ranges from 40° to 45°, perhaps for a short time, dropping once or twice in winter to 35 degrees. Well Mr. Editor we have "spun our say," out to a greater length than any idea of at start.

We trust you will pardon us if we have tried your patience, but having once been beginners ourselves we realize how necessary are the details to assist in understanding, after all, success depends more on attending to the details and giving your attention closely, than in a mere attention to general principles alone.

Believing as we do, that there is more of a science in successfully "springing" an apiary than in wintering same, we will, if you so desire, give you an item on our course of spring treatment.

Dundee, Ill. J. OATMAN & Co.

For the American Bee Journal.

Marketing Honey.

I find the best method of marketing my honey, both comb and extracted is to sell direct to the consumer or retail dealer, and not send to honey dealers for them to adulterate. Last year I put a half barrel of extracted and about 50 lbs of comb-honey into my spring wagon, and went among the consumers and sold to them at 12½ to 15 cts. per lb. for extracted and 25 cts. for comb honey, and in a short time I sold all my extracted honey, and could have sold as much more in about a week, as the people found out that it was genuine honey and not glucose, sugar syrup, &c., with a little honey added, as is most of the so-called honey sent out by the city honey dealers, and besides the spurious honey is so high in price that it is beyond the reach of many people that would like honey.

If the producer would take a little time and trouble to furnish the consumer with the genuine honey at a moderate price, and thus get a market established, he will be surprised at the amount he could sell and not be swindled out of his money by honey dealers. Parties that only got a few pounds of me last year, are beginning to speak for 50 to 150 lbs of ext honey, and the prospect is that I cannot half supply the demand, another year, without an extraordinary yield of honey, and I will have 80 colonies (if I do not lose any) to commence the season with. By the producer selling his own honey at a reason-

able price to the consumer, he will drive out all of the doctored honey, as the retail grocers will not handle it. One of our grocery men got some from Chicago, put up last year, and it soured on his hands. He says, no more Chicago honey for him, as he thinks the only honey in it was what little some small pieces of comb contained that was put in and pressed against the glass.

I sold of my own raising last year ext. honey 1700 lbs. comb honey 300 pounds, and comb honey I bought from a man six miles from me, 1000 pounds.

Fulton, Ill.

R. R. MURPHY.

For the American Bee Journal.

Tall and Shallow Frames.

As Mr. R. J. Colburn takes exception to the shallow frame, in the March number, page 55, I would like to give some of my experience with tall and shallow frames. Mr. Colburn seems to reason a good deal from theory; but I find in practice, they pay but little attention to keeping brood in an exact circle, but have a wonderful adaptability to circumstances, and will place their brood where they can care for it and keep it warm the easiest. If stocks come out all strong, and keep so through the spring, they will probably breed up well enough in most any kind of hive, but if they get reduced down to a mere handful, as many did the last two seasons, that is what tests the shape of the frame for breeding up. The frames generally used here, takes a comb about 8 inches deep by 17 inches long, and we think that we don't want a comb that will breed up better in the spring; I have used the same frame stood on end, that is 17 inches deep, and found that when I got a stock reduced in those early in the season, I was completely swamped, no amount of cuddling would induce them to breed bees of any consequence, till hot weather and warm nights, they would have a little brood in the top end of two or three combs, and the only way they could spread their brood was to carry it downward, and they could not do that, as they were not numerous enough to carry the heat down. The same amount of brood and bees, started in the middle of the shallow frame, would increase to quite a nice colony, by the time the tall one would begin to do anything. In the long shallow frame, they will spread the brood each way, along the tops of two or three frames, and they have the heat with them, and will raise a great many more bees than they will in the tall one. With strong stocks, or in warm weather, the

tall comb will breed as many bees as the other probably.

I have never used a comb 12 by 12, but have used one 8 inches deep by 12, and found when bees were reduced in spring in that, comb 8 by 17 inches was far superior, from the fact, that bees will spread their brood along the top of a long comb, in weather, when they cannot be induced to spread it latterly across space into another comb. I am now using a comb 10 by 12 inches, and don't think it breeds up as well with weak stocks as the shallow frame, but can't tell why, unless it is because we leave out the lower cold strata entirely, leaving the hive so much warmer. My experience with pure Italians for box honey, corroborates Mr. Butler's exactly, on page 56. Can't our present bee, be improved by judicious selections in breeding? J. P. MOORE.

Binghamton, N. Y.

For the American Bee Journal.

Missouri Bee Killer, &c.

On page 36, Feb. No. present Vol., Mr. Sonne's article calls for observers to help him to awaken an interest of all beekeepers to the importance of it. I have been acquainted with those insects for four or five years here in this section of Southwest Missouri, but never knew them in Central Indiana or the Alleghany Mountains. In Northern West Virginia, where I have formerly lived, I have seen them destroying many of my bees, and other insects and sometimes each other in the same manner. They are very stupid and dull in cool or rainy weather, and appear to be much more numerous in dry weather and when the sun shines very hot. This country seems to be a natural home for them and there are many of them here, and I think they are on the increase. How much they may interfere with our apiary in the future I cannot tell. I know they kill many of my bees but I cannot see that my colonies are weakened by them. My bees are kept at a good breeding stage all summer.

Mr. Sonne speaks of there being plenty of flowers, and that his bees would not bring honey in, now we have many times past had plenty of flowers for honey; but no honey, because the weather was not such that the flowers would secrete honey. As yet, the cold winds and rains early in spring, when peach and early bloom comes are more of a drawback to me than the Missouri bee-killer.

My bees are in prime order on summer stands. E. LISTON.

Virgil City, Cedar Co., Mo.

For the American Bee Journal.

Honey Granulating.

In the February number, on page 36, Mr. Charles Dadant says: "That if they (the readers) on the market, from December to June, a so-called honey in liquid condition, they can, with absolute certainty, declare it a sophisticated honey, or at least a honey which, by boiling, or by pure mixture, has lost its character as a true and pure article."

That may be the case, where he lives or in any cold country, and cold may be the cause of honey granulating there, but it is not the case here. I am justified in thinking, that honey from certain flowers has a greater tendency to candy, than that from others, and possibly if both are extracted or strained together, it will all granulate within a short time. I bought in June last, one hundred stands of bees, and commenced to extract on the 27th of July. The honey of that extracting was gathered from white sage, sumac and other mountain flowers. After three or four weeks I extracted again. A great deal of that was gathered from a blue flower, which we here call flea weed, (it smells somewhat like vinegar, but rather strong and disagreeable), which came into bloom after the first extracting. Both lots were treated alike, sealed up in five gallon tin cans, placed out doors in the warm sunshine and stood there for several weeks. I use a great deal of honey myself, have for months, had a can of the first extracting open, only covered with a piece of thin paper to exclude flies, and it is now as liquid as when extracted, only thicker on account of lower temperature. Another can of the same lot, soldered up air-tight, was on examination a short time ago like the one mentioned, and a sample of the same in a two ounce bottle simply corked shows no signs whatever of granulating.

On the other hand, every drop of the second extracting became within two months as solid as lard. Cold could not have done it, for it was in the latter part of summer or beginning of fall, and it is even in winter seldom cold enough here, where I live, in the mouth of a cannon, to find in the morning a sheet of ice one sixteenth of an inch thick. I am therefore inclined to think, that the honey from certain flowers, and particularly from this flea weed, *will* granulate, while that from others *may* under certain circumstances do so, and that a mixture of both will granulate within a certain time, dependent on the proportion of the two kinds of honey.

I will only add, that I have five year's

experience in bee keeping, and that what I have stated in regard to last year holds good for the former four.

As people here prefer liquid honey to granulated, I had to melt all my honey of the last extracting.

On page 28, February number, you say: "There is an increasing demand there for honey." Please inform us, who will buy and at what price and in what size and kind of packages. We have always had trouble with our honey candying after it was shipped, and have had to take a considerably lower price on that account. Should be glad to find a market for the candied honey, which, as you say must be the pure article, although our liquid honey also is pure, even if remaining liquid for years.

WM. MUTH-RASMUSSEN.

Los Angeles, Cal., Feb. 22, '75.

For the American Bee Journal.

To Double the Capacity of Hives.

As the matter published in the January No. was designed simply as an explanation of a method, which I accidentally hit upon several years ago, of getting bees to build straight combs; I try to say, in addition, that the method consists in crowding the hive with bees, to double its capacity, (according to ordinary ideas), by means of a division board or, what is better, whenever possible, uniting swarms.

I fill the hive so full that in hot weather some bees will hang out the first night. I prefer the latter way of doing this, for several reasons: I secure not only straight, but mainly *worker* combs; avoid large increase of stocks; am apt to get a big lot of box honey; and avoid the great amount of labor and fussing, (mentioned in explanation published), which may be properly characterized as an application of the old laborious method to the new, necessitated by want of bees enough to properly apply the latter. I had observed that when I filled a hive by doubling, there was little trouble from drone comb in comparison with what there was, when I had to put in empty frames between others as guides, also I thought an increased tendency to build worker comb in boxes, and also a liability of the queen to lay drone comb in the boxes, both of which I attributed to the treatment mentioned, considering them as objections; the former, to be remedied by using only store or drone comb for guides in boxes, the latter, as the result of a want of drone comb below. But on reflection, I am inclined to think it may impart at least, be

owing to my exceedingly shallow frames, they being but little over $5\frac{1}{2}$ inches deep.

I had observed thus far, but had not thought, of this crowding, to get them to build worker combs exclusively, until I saw friend Dean's method of securing all worker combs, published in August No. of *Gleanings*, when it immediately occurred to me that his and my measures each corroborated the other. Novice saw the point, for in publishing, "How to secure straight combs everytime," he comments: "The principal is essentially the one friend Dean works on." *Gleanings*, Vol. 2, page 160. So it seems "the same stone kills both birds."

Douglass, Mich.

H. HUDSON.

Size of Hives.

As to the size and shape of hives, I think we should be governed by the climate we live in. All must use their judgment in the matter. As for me, I like deep frames.

My 16 stands of bees are all right, on their summer stands, though one only had three cards last fall, and was very weak. Now it is as lively as any of them, having bees enough to cover one comb 12x13.

I can open any of my hives, without fear of stings without the aid of smoke or anything else. As no stranger could do this, I argue that my bees know me. Recently I gave my bees some flour, and stood in their course, about 10 rods off, they lit on me, and then went to the flour. I tried the same with a neighbor's bees, but they took no notice of me. If bees do not know their master, why this difference?

Wooster, Ohio.

D. H. OGDEN.

For the American Bee Journal.

The Hive I Use.

Having experimented with boxes for comb honey for many years, I conclude the one I now use is the best that has come under my observation.

And if you think it of any value to the bee fraternity, you may give it an insertion in the JOURNAL.

I take thin lumber $\frac{1}{4}$ or $\frac{3}{8}$ inch thick, cut out two pieces four inches wide, $12\frac{1}{2}$ long, than cut out nine slats $13\frac{1}{2}$ long, and $\frac{1}{2}$ wide, then nail the slats on one edge of each of the two sides, leaving a space between the slats of $\frac{1}{2}$ inch. Then draw lines with a square from each slat across the two sides, and then nail on nine other slats opposite to the first. In putting on the last nine slats use an awl and

shoemaker's pegs, so that they can be taken off easily with the hand. Close the ends with slats $\frac{1}{2}$ inch square with spaces as in top and bottom, put on with pegs also.

The vacancies should correspond with those of the frames. Boxes can be put on top of each other. One filled with honey and bees should be raised up, and the empty one slipped under and left until the bees work in the lower comb.

The advantages are: the conveniences of taking out the honey, and the perfect view of the whole inside without the use of glass. I had two boxes filled the last season 16 lbs. each, would have had more, but had only two swarms to start with, and that in the latter part of May.

W. W. MOORE.

Gillett's Grove, Clay Co., Iowa.

Reply to Dadant.

Dadant, in the March No. of the A. B. J., says: In the last convention of the N. B. K. A., a few bee-keepers have fired at the importation of bees. He says, A. Benedict was the first to begin the fire, and says, he (A. B.) said that he supposed that there were hybrid bees in Italy. Upon reading this, I wrote to him (me) to know on what he had based his supposition. But in his answer he could give nothing definite. He had seen so called imported queens, that were undoubtedly impure; and then says, but for himself (meaning me) all the imported queens he had received were pure. Now if D., will read my letter again, he will see that I did not write him that all the imported queens I received were pure, but far from it. If I am any judge, I have received queens, imported ones, that produced one and two banded workers; and I have received queens that would produce queens, that if mated with black drones would produce a majority of three banded workers; and I have received queens, if there progeny mated with black drones they would produce a majority of black bees. Now, friend D., why is this? If one is pure, so is the other.

If I am not much mistaken, our friend D. in an article written a few years back, for one of the Bee Journals, claimed that there was a great difference in the color of the bees in different districts in Italy. He claimed that the dark ones were claimed to be the best bees; the light colored not so good. I sent friend Dadant some money a year or so ago, requesting him to procure me a queen that produced as light bees as could be found in Italy; but he failed to go, and sent back the

money. The best and lightest colored bees I ever saw, were produced from one of six queens purchased of S. B. Parsons, Flushing, Long Island, several years ago. Parsons had imported a full colony from Italy; this colony was carried over the mountains on mens' shoulders. Undoubtedly this colony was selected for its bright color. The above queen produced workers almost white; the drones were of a dark red color; to stand a few paces from the hive and look at the bees, they appear almost white. And the drones look as if they were entirely black, but on close inspection, they were very glossy and redish in color.

These bees looked very singular, basking in the sunlight, in front of the hive, the bees so light and the drones so dark, they were readily distinguished, the one from the other. I have never seen but the one queen that procured exactly such bees.

Now, my opinion is, that just such bees can be found in Italy. I am not down on importing bees. But I am in favor of a careful and judicious selection of the queen.

I hope friend Dadant will attend our convention, and if we say anything that is not right, he can there correct it, and tell us all about Italian bees.

AARON BENEDICT.

Bennington, Ohio.

For the American Bee Journal.

How to Make Hives.

For the benefit of those who do not know how to make bee hives, and who would rather make them than to buy, I will try to give directions as plain as I can.

In the first place get your lumber dressed on both sides to exactly $\frac{1}{2}$ of an inch. Use lumber just 12 inches wide for the hive, the frames should run from front to rear; the front and back boards are 12x16 with a rabbett $\frac{3}{4}$ x $\frac{1}{2}$ across the ends, and $\frac{3}{4}$ x $\frac{1}{2}$ across the top edge for the frames, the side boards are 12x15 $\frac{1}{2}$, nail on a $\frac{3}{4}$ board for bottom and clamp, and one with a $\frac{3}{4}$ clamp [on top] for cover. Have an extra wide cover to shade the hive in hot weather, make a stand four inches high, with the front board slanting to form an alighting board or "down step."

The frames are 11x14, top and end bars are 7-16 inches thick, bottom $\frac{1}{2}$, top bar is 15 $\frac{1}{2}$ long, ends 10 $\frac{1}{2}$, bottom 14 inches long.

For comb honey place a case six inches deep flat upon the hive, except that the end bars are only five inches long, of course the cover or honey board must be removed and placed upon the super.

Don't think of using extra rabbitets or bevels or quilts; its all nonsense, I think, except in Spring. Quilts or straw mats are then an advantage. For extracted honey use the § bottom in upper hive, or not, as you prefer. I prefer the board between sections. For comb honey, don't think of using boxes or a honey board below your comb, I and others have seen the folly of it in cold weather. Section frames for surplus are good, but they are more bother than the common surplus, so I think it better to discard them and never more think of them.

The above described hive can be made for \$2.00, or cut ready to mail for \$1.50 or less by the dozen. R. S. BECKTELL.

New Buffalo, Mich.

A Closing Word With Mrs. L. Harrison.

As an offensively personal article published by Mrs. L. Harrison, some time ago, in the *Prairie Farmer*, appears word for word, in the April number of the AMERICAN BEE JOURNAL, as a communication to the JOURNAL, I ask you, in single justice, to make room for a portion of my reply as published in the *Prairie Farmer*, as follows:

The ill-natured epithets and redundancy of adjectives in your last week's issue, over the above named title, do not constitute argument. As to my logic, let me say to my profound logician-critic that to "put language into my mouth which I was never guilty of" is as she rightly interprets, to misquote me; to "otherwise" falsify "my statement," is to do so in her own language, without quotation marks. Further that "on that subject" (relation of honey bee to horticulture) is quite a different thing from "on that subject at the last meeting of the Illinois State Horticultural Society"—this last being her language, not mine. * * * I care not to waste your space in a war of words with Mrs. L. Harrison, and will simply say to her in conclusion that *were* she "a man," my pen would not be so guarded. As for her contempt, judging from both the matter and manner of her recent communications, I feel more honored by it than I should by her esteem.

The transactions of the Illinois State Horticultural Society, for 1874, which contains a report of the discussion which gave rise to this unpleasant controversy, are just published. I saw no proofs of this report which, with few exceptions, is as correct a statement of my remarks, as could well be made in so condensed a form; and those of your readers who can refer to it will judge for themselves whether Mrs. Harrison's communication in your February number was warranted or not.

In conclusion let me say to Mrs. H. that she is mistaken in supposing that I have any "spite" to vent against her or any one else. But when unjustly assailed

and misrepresented, I am apt to defend myself, even against a lady—however much I may regret the occasion.

St. Louis, Mo.

C. V. RILEY.

Foul Brood.

Having had some experience with this disease for the past five years, it occurred to me that my experiments might be of some value to others; I had noticed for several years, a few cells of foul brood, here and there in the combs, and had been in the habit of cutting them out, but was not aware at the time that it was foul brood, but now recognize it as the genuine disease in a mild form.

In the fall of 1870, the bees filled up the combs late in the season with watery honey, mostly from fireweed. Cold weather came on suddenly, and the bees were unable to cap it over. The result was, that most of the swarm had the dysentery, and were lost during the winter. Some may say that if they had been properly housed, they would have come out all right. This, I am inclined to doubt, as one of my neighbors lost fifty swarms in a house constructed for the purpose, when they had always done well before. In the spring the uncapped honey soured, and the pollen fermented as though yeast had been put into it. The combs were used the next season to increase the size of the hives, and became the seat of the disease, which was spread by changing combs, through all the swarms. The remedies resorted to this season, were to take away the combs most affected and replace with empty combs from the hives when the bees had died the winter previous. I learned in the operation, that while the first brood hatched in combs which had contained sound honey or fermented pollen was badly diseased; brood in combs that had been filled with capped honey was but slightly affected until the third set of eggs was hatched. All the honey was extracted from these combs before they were put into the hives. From two swarms which were badly diseased, the combs were all taken away, and the bees put into new hives, and treated as new swarms. One swarm was fed with honey extracted from the diseased combs, and at the end of four weeks, was found to be the worst diseased swarm in the apiary. There was not live brood enough to be worth saving, and the combs were again taken away, and the bees put into a clean hive as before, together with the bees that had hatched from the old combs. They were fed with sugar and water, to give them a start, and in the fall were examined and found free from any signs of disease. The other swarm from which the combs were taken, showed no signs of infection. The old combs with a few bees to take care of the healthy brood were left in the old hive. The badly diseased combs were destroyed as soon as the brood was hatched. Combs that were clean were left for the bees to store honey in. This swarm though not strong, stored a little over one hundred pounds of extracted honey. The bees were kept without a queen, and allowed to wear themselves out gathering honey, and as soon as they were so weak that there was danger of their being robbed, the combs were all taken away, honey extracted, and

combs destroyed. The few bees left were given to swarms, undergoing treatment, or destroyed as circumstances dictated.

The old swarms treated as new, this year, and the succeeding years, have come out free from infection with the one exception spoken of above. Unfortunately for my experiments both these swarms were lost the winter following, and I was left with none but the old stocks that had more or less foul brood in them. The next spring I kept the disease in check until swarming time, by vaporizing the combs with hyposulphite of soda. Then removed the combs and treated the same as the year before, with the exception of trying to clean the cells as Dr. Abbee recommends, with an atomizer. It did not work to suit me, and I afterwards used a small bulb syringe which did the work easier. I found it a long and tedious job, to open and clean the cells filled with putrid matter. It appeared to be effectual in all cases, except when there was a deposit of old pollen in the cells, which the bees would not clean out, and the brood raised on top of it would be infected. The most difficult work of all, was to clean out the cells where the larva had died and dried up in the cell, without being capped over. This dried up larva is the coffee colored deposit found on the bottom board. The bees will clean them out after it is vaporized, but the disease does not appear to be entirely eradicated from them. The bees seldom uncap a cell filled with putrid matter. They make a small opening to see what the trouble is, and leave it in disgust. The amount of work attending the cleansing of the combs, and the uncertainty of the result, brought me to believe that there was no economy in trying to save them. That it was better to keep the bees in the best of these old combs, without a queen, and get all the honey you could from them, and destroy all the combs in the fall. Since then I limited my operations to this idea. As soon as the brood was all hatched, the honey was extracted, the best or cleanest combs were vaporized with hyposulphite of soda, the hive washed with the same, making all as clean as possible. Whenever honey is extracted, the combs are vaporized and put back into the same hive until the honey season is over, or the bees are worn out. The combs not used, are melted into wax as soon as possible to make sure that no bees get to them. Too much care cannot be taken to prevent the spread of this disease. I should not handle healthy swarms after opening an infected one, or use any of the tools for that purpose. I am satisfied from feeding one swarm with the honey extracted from diseased combs, that it is almost sure to carry the infection with it. If I wished to experiment further with it, I should try soaking the combs in a solution of chloride of lime, and afterward clean with an extractor as suggested by Dr. Abbee. We ought to be thankful to Dr. Preuss for his microscopic examinations and Dr. Abbee for remedies. I treated my hives to a bath of burning sulphur by making a fire on the ground with a few chips, placing hives over the fire one on top of the other, without any top or bottom board, the heat passing through the hives like a chimney. After they were well heated up, a handful of sulphur was thrown in and a cap or board put on the top to keep the fumes of sulphur in. I then cleaned up the hives, gave them two good coats of paint inside

and out, and count them as good as new. All frames and honey boards that were worth saving, were baked in a stove oven, and put in order for use, confident that they are free from anything that will start the disease. I introduced the disease the second time, into my apiary with a swarm bought in the spring of 1873, and I am fully satisfied that in this case it was caused from fermented pollen, as these combs were the first affected and the only ones for some time. Had there been any disease in the hive the year previous, it could hardly have escaped my notice when the combs were transferred to frames.

By this treatment, I have as many healthy swarms at the close of the season, as I had diseased ones in the spring, beside the honey which the bees hatched from the diseased combs gather, which is largely in excess of what I had expected.

I have sometimes got a few boxes of honey from the old swarms treated as new, but am satisfied if the hive is well stored with honey, and the bees in good condition for winter.

One great problem to solve is, is there any danger to other apiaries in this way of managing the swarms?

My opinion is that after the honey has been extracted the second time, and the combs have had a second vaporizing, that the honey if taken to a healthy swarm would not carry the infection with it. I should be afraid to use the old combs for brood combs without further treatment, as the old pollen might still retain the seeds of the disease.

I have noticed that the swarms kept without a queen, cap a large portion of the honey with an oval cap like that over drone brood. This has been so universal that I suspect something wrong with the queen in any hive when I find honey so capped.

L. C. WHITING.

East Saginaw, Michigan.

Getting Honey in Boxes.

Paper read at the seventh annual session of the Michigan Bee-Keepers' Association, Dec. 16th and 17th, 1874.

At your request, I will give a brief description of our way of making box-honey. Not, however, with the idea of instructing your association, or of influencing any one, who has had more experience. We haven't got it perfect yet by any means.

THE HIVE.

I haven't had experience enough with the side-box hive, to be able to recommend it for general use. If bees will swarm from them, as readily as from top-box hives, then we have our labor in vain, in making more expensive hives, and in putting on a greater number of boxes. Bees swarmed immoderately last season in this section, from all kinds of hives.

I can safely recommend the Langstroth hives for box-honey, as I have had experience in their use, and they are successfully used, and are the leading hive in this section. It is ten inches deep, with ten frames.

THE MANAGEMENT.

As we have but little basswood, we are obliged to manage our bees, so as to have honey stored in boxes, from white and alsike clover, tulip, &c., in the early part of the season, (otherwise, we should have no

white honey to sell, and the business would be unprofitable). To do this, we design to get our combs well stocked with brood, and our hives filled with bees, by the time that clover begins to yield honey. Then we keep all old stocks strong, put on the boxes, a full set of 12 at once, and when they get so crowded with bees, both the hive and boxes, that we think there is danger of their swarming, we take away a card or two of cutting brood and adhering bees, and replace with an empty comb, or an empty frame. The brood and bees drawn, form nuclei. With some stocks, the drawing will have to be repeated after a few days, while others don't seem to start work in the boxes until we put in an empty frame, and set them to making wax in the hive.

Those stocks that are building comb in the hive, will need to have their combs looked over, about once a week while the yield of honey lost, in order to cut out the drone comb, before the brood is fed in it, so as to have it nice and white for the boxes. It requires the exercise of some judgment, in drawing brood, as it is better not to draw any and let them swarm out, than to draw too soon, or too much. The amount of brood taken depends so much on the yield of honey, the condition of the hive, and the quantity and age of the brood on hand, that no special rules can be given, and each must learn from experience in his locality.

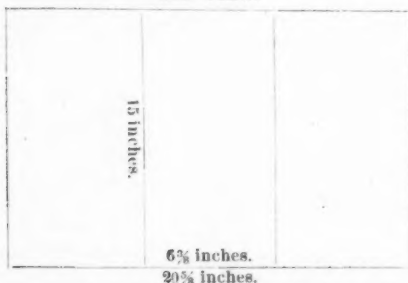
KEEP STOCKS STRONG.

Each old stock is kept strong, and the extractor is not used on any stock that is storing honey in boxes. If they are well shaded by large trees, and situated so as to have a free circulation of air around the hives, by raising these up a foot or so from the ground, and a little brood taken away from time to time, as they can spare it, they will trouble but little about swarming in seasons when the yield of honey is good.

THE BOX ARRANGEMENT.

We do away with the honey board entirely, in order to bring the boxes nearer to the brood, and to give more free access to them, than we could do through the honey board; we like the two-comb box best, 6 $\frac{3}{4}$ inches long by 3 $\frac{3}{4}$ inches, comb space 5 inches high. We put twelve such boxes on a hive that measures 21 $\frac{1}{4}$ inches in length by 16 wide (outside measure), by using a rack or clamp in this form.

TOP VIEW.



Take stuff $\frac{3}{8}$ inch thick, 2 $\frac{1}{2}$ inches wide, cut four pieces 15 inches long, and two pieces 20 $\frac{1}{2}$ inches long, nail through the long pieces, into the ends of the short pieces, with finishing sixes, leaving the spaces 6 $\frac{3}{4}$ inches plump, so the boxes will slip in easy, four boxes in each row; then take hoop iron, cut four pieces 15 inches long, and

punch four holes in each, large enough for a lath nail, turn the rack over, and nail a piece of hoop iron on the bottom edge of each cross-piece, so as to support the boxes. The top of the hive should be planed down, until the bottom of the boxes come down within 3-16 of an inch of the frame. This rack will hold 9 three-comb boxes, or 18 one-comb boxes, or 12 two-comb. We prefer the latter, with three slits in the bottom of each box. The slits are $\frac{1}{2}$ inch wide by 4 $\frac{3}{4}$ inches long, one in the middle and one within $\frac{1}{4}$ inch of either side, leaving an inch of sound wood at each end for strength. There should be $\frac{1}{2}$ of an inch side shake, to each row of boxes, for convenience in getting them out.

TIERING UP.

When the bees get the first tier of boxes full, and begin to seal up, and get it sealed up half way down or so, we raise them up and put a set of empty boxes under them, with slits in the top to correspond and guide combs in place. When the first set of boxes are nearly full, is the most critical time with us, as they are then crowded for room, and get the swarming fever in consequence. If the whole set are not ready at once, we would raise one row, or even one or two boxes if no more are ready; can give room by tiering up instead of drawing brood; use a rim to make the cover six inches deeper for each tier.

RISKS OF SWARMING.

In keeping all stocks very strong, we of course take some risks of swarming. One wing of each queen is clipped, so that there is no climbing of large trees, or going to the woods about it. We have found the following plan the most successful to quell the swarming fever after they attempt to swarm: Have saw-dust, or tan-bark around the hives, or else keep the grass cut very close, so as to find the queen readily when a swarm rushes out; pick up the queen and put her in a wire cage, and wad a piece of paper in the mouth of the cage to confine her till the swarm returns, then cover the old hive with a sheet or large cloth, to prevent the bees from entering it, and place an empty hive or box in front of it, in such a manner as to catch the swarm when it returns; lay the queen and cage down at the mouth of this hive, and when the bees begin to enter, liberate the queen, and they will go in more readily; when they have entered, remove the swarm to a new locality, a rod or two distant, in the shade if convenient; having swarmed they will adhere to the new location. Now remove the old hive a few feet to one side, and place a nucleus with an unhatched queen cell, or an empty nucleus hive, on the old stand; take off the boxes from the old hive, take out the brood combs, and brush off every bee remaining in the hive, into the nucleus. If the hive containing the new swarm, is the same size of the old one, we would put brood combs (as fast as we clear them of bees, of queen cells, and drone brood) directly into the swarm, and let them occupy it. The boxes should be cleared of bees also, and put on the swarm, and tiered up if any are ready. Now we have the bees sorted. We have a new swarm on a new stand, that is, we have all the bees that are favorable to the old queen with her, and have given them all the worker brood, and all the boxes, and we have got rid of all the bees that were raising queens. When we have

served them thus, we have found, that they generally resume work in the boxes, and make no further trouble about swarming for the season. In view of the condition of the honey markets, it looks as though box-honey would be superceded by small frames, as the exclusive honey dealers cut out a great deal of comb-honey, and put it up in jars with extracted honey. I believe small frames are well liked by consumers everywhere, but are not well liked by large grocers, where they deliver all goods to the consumer in wagons.

Binghamton, N. Y.

J. P. MOORE.

For the American Bee Journal.

Patent Hives and Venders.

In reading the articles of some of your correspondents, one would almost be led to believe that patent rights on bee hives are and have been all humbugs and those owning or selling them the biggest swindlers outside the pale of law. Now let us carefully examine this subject and see if this business is wrong and deserving the condemnation of all honest apiarians. Is it anything against a worthy patent right, that some one has been made the dupe of sharpers and bought a useless article, perhaps, what purported to be a patented bee hive, when if they had subscribed for and read any one of our BEE JOURNALS, they would for half the money, been intelligently posted and proof against all humbugs in the shape of worthless bee hives.

Query: Does it detract from the merits of the old AMERICAN BEE JOURNAL, because its issues were copyrighted?

Are patent laws considered in all civilized countries so necessary to foster and encourage invention, but blots upon the Statute Books, which ought to be wiped out? Can any considerate person demur at their justness and hesitate to acknowledge their protecting influence in fostering improvement whether it be an intricate piece of mechanism, an agricultural implement or a movable comb frame bee-hive. Is Langstroth's work on the Hive and Honey-Bee of less value because it recommends a bee hive invented by its author, and explains the advantages of the movable comb frame? Do we think any the less of the teachings of this eminent apiarian because he presumed to obtain a patent upon the hive he had spent the best years of his life in devising to meet the wants of the apiary, and which added millions of pounds to the honey surplus of the country besides giving a new impetus to bee-keeping? Is not as quoted by Mrs. Tupper in her Essay for Agricultural Report "The laborer worthy of his hire." Have not patent hive men in bringing their hives to the notice of the public furnished advertisements for our journals, promoted bee-culture and helped to create an interest in this much neglected pursuit? Do not the articles written by the elderly gentleman, Mr. Jasper Hazen, though somewhat devoted to his pet theory "overstocking" infuse new life into bee-keeping and well repay an earnest perusal? Have not Mr. Hazen and Mr. Abbey demonstrated what may be done in the way of obtaining surplus honey from side storing hives, by piling boxes either at the side or ends of the frames?

Have not the frame of the American bee-hive introduced by Mr. H. A. King, become a standard with some apiarians, as has the varied forms of the Langstroth frame, and who would dispense with their use for ten times what their rights cost them. What Mr. Harbeson has done to develop the culture in California, as demonstrated by his shipments of tons of honey from the Golden State is in beautiful contrast with the tableaux presented in the moving of his first swarms across the plains before the track of the iron horse had spanned the continent. Yet this same Harbison is, or was a patent right bee-hive man.

What is true in the above mentioned cases is the same with numerous other patented hives, each possessing more or less merit as skillfully handled by the operator having it in charge. In most cases a practical apiarian could take any of the movable comb frame hives now in use and be successful with them, whereas a tryo might fail with the best hive extant. Do we not see the hive invented and used by New York's venerable bee-keeper condemned by an Ohio "Novice" and yet read of a correspondent to his "gleanings" going through a yard of 60 Quinby hives in an almost incredibly short space of time for such an operation? And that New York's great honey raiser, Capt. Hetherington, of Cherry Valley, had gone to some thousands of dollarly expense in changing his hives to this same (by Novice) condemned style. Who among your many readers would hesitate to purchase the right to make and use the perfect bee-hive (not yet invented.)

At present the hive best adapted to the attaining of surplus and successful wintering depends more upon the skill of the operator and not in the make of any particular style, though some may possess great advantages over others. In consideration of all these facts is it not more advisable to encourage improvement, trusting to our judgments to distinguish what is and what is not best for us to use and not frown upon or discard a worthy article, because the inventor has been to the expense of getting it patented.

Does it detract anything from the merit of a well made and painted hive, because you can get a non-patented simplicity for one dollar which in the estimation of many, would be dear at most any price. Does it look reasonable that one who has made a small fortune out of patented bee implements, prompted by a remorseful conscience should at this late day conclude that selling rights is wrong and advise bee-keepers "to invest no money in territory for patents of any kind." Yet in the same issue of his Magazine advertise for twenty-five cents to send directions for making the "International" which said directions sum up thus. "An ingenious mechanic might make a hive nearly correct from these directions; but we advise all to remit for a sample hive which we will send from the nearest factory." Probably a second attack of the above nature will lead to the publishing of these directions free but never include the sending of a sample hive. No one who has sent seventy-five cents for a much advertised bee-feeder and in return received a tin cup, worth about 15 or 20 cents, and which could be hired made at most any tinsmith's for 9 or 10 dollars per hundred will not be at all surprised at this change of conscience. Has this the look of a strictly con-

scientious move, or does it rather savor of a change in policy to create a larger demand for advertised wares perhaps at the expense of those who are selling patented articles. Another loudly proclaims that his wares are not patented, but when you think you could manufacture the metal corners cheaper than to send to Ohio for them and write for particulars, you receive in reply to your inquiries, that the corners are not patented, but the machine which stamps them out is, and costs in the neighborhood of \$2.50; that you can manufacture for your own use, but not to sell. Generosity unparalleled: you can have the privilege of paying \$2.50 for a patented machine to manufacture perhaps \$20 worth of tins for your own use and then hold up, or find yourself brought before Uncle Sam's bar of justice, to answer for infringement of the patent laws. Oh, consistency thou art a jewel!" While exhibiting honey at the N. Y. State Fair, last fall, I had an opportunity to converse with many bee-keepers, and found representatives for most kinds of hives in general use, not one of whom complained of ever having been swindled in buying a patent bee-hive. My observation is that improved bee-keeping and patent hives have gone together and that we are pretty certain to find the old gum in use where the brimstone theory is still in vogue. I would in no way apologize for a hive or queen swindler, but do not believe in condemning the genuine because there is sometimes a counterfeit. We have this consolation that the Patent Laws do not compel us to use a patented article, consequently it it does not suit us, all we have to do is to let it alone.

The present demands the united action of those interested in promoting the interest of bee-culture as a broad field for occupation remains unoccupied, and those who are devoting time and money to the furtherance of this neglected industry are entitled to our encouragement, that they may succeed in devising means to secure more of the tons of liquid sweet which annually go to waste for want of gatherers. This secretion of honey which only takes place when atmospheric conditions are favorable, often vanishes with the disappearance of the morning dew and without plenty of laborers cannot be saved. The field is broad and open to all. There need be no clashing of weapons, for as a rule he who vends a hive will endeavor to introduce the best, as he has a reputation at stake and if he makes a mistake it will be an error of head rather than of heart.

C. R. ISHAM.

Peoria, Wyoming Co., N. Y.

Enemies of the Bee.

I notice in the February JOURNAL an article on "Bee Enemies," giving a description of the Asilus family, and an account of their operations as bee-killers. Now we have an insect here called the mosquito hawk, that is very destructive to bees, and resembling the insect described in the article referred to, but is much larger, measuring two and a half inches and more in length. It is no doubt of the same family, but being no entomologist, I cannot say. This "hawk" makes its appearance usually about the middle of June, and comes in numbers varying with the locust of Egypt, or grasshoppers of Kansas. For the first month or so, they are

seen only at evening, near sun down, but as the season arrives, they operate to some extent the whole day; always turning out, however, in great numbers, in the evening. They seem to be always on the wing, except when devouring their prey. The air is filled with them, darting hither and thither swiftly, like bees swarming, and almost as dense.

They take the bees while on the wing and when settled on the hive, by pouncing on them, just as a chicken hawk does upon his prey, and then light upon a perch, high up in a tree, if one is convenient.

In what way they operate on the bee in devouring it, or what part they eat, I have never been able to discover, from the fact that my apiary is in the midst of tall native oaks, to the limbs of which these cannibals resort to regale themselves on their captives. They all disappear about the first of September. From their great numbers and the length of time they operate, say three months, they must destroy millions of bees.

How to destroy these "Jayhawkers" or prevent their ravages, is what puzzles me. To knock down a few hundred with a bush, as you may easily do as they whiz past, does not seem to lessen the number. As McBeth said of the English: "The cry is, still they come." Let us hear from some of your bug men, on this mammoth asilus of the South. Last year was a very poor year for honey until September, when the bees commenced on the smart weed, and for five weeks they worked on it, gathering abundant winter supplies of the richest and most delicious honey. I never dreamed of that weed producing honey or being good for anything else before. It grows here in great profusion, and is certainly the most valuable honey-producing plant we have in this region.

J. APPLEWHITE.

For the American Bee Journal.

How I Succeeded.

I promised in the July No. to report my success during the summer, with the High Pressure Hive worked on the different plans proposed, viz: Hazens' Adair vs. Gallup, &c.

Well, after breeding up largely in the spring as I was able, *it being a very late one*, I arranged swarm No. 1, to work on Hazens' plan, and got 32 5 lb. boxes imperfectly filled, about 125 lbs., divided the swarm in September, and with an extractor took 60 lbs. that was not needed for winter.

Swarm No. 2, I worked on Adair's long one-story, extended it to four feet eight inches, eight inches more than I got occupied, worked exclusively with the extractor, got a trifle over two hundred pounds, divided in September made two very large swarms.

Swarm No. 3, worked two stories, full size, with forty frames. It seemed too large, and was not occupied to advantage. I worked with the extractor, got 148 lbs. divided in September.

Swarm No. 4, I divided as soon as bred up, worked them in the single high pressure hive, two story each; got 305 lbs. from the two.

Swarm No. 5 and 6, I worked full size, lower story, with twenty frames each, with long boxes and little frames, in supers. No. 5 gave a good yield of honey. No. 6 after

running some time in the summer with a poor queen, they superseded her or rather I did; but they hardly more than got into condition for winter. The six figured up to 1,200 lbs. and a trifle over, and four swarms of increase.

I would say that I had the benefit of about sixty empty cards. My whole apiary of 35 swarms, in the spring, gave me 2,400 lbs., and 32 increase, and are now, March 11th, in close confinement, numbering over 90. The thermometer ranging from 38 to 45 degrees above zero, all seem to be doing well. I am inclined to the belief that a long one-story hive will allow more increase than any other form of hive; but as to surplus honey, I choose to experiment farther before I decide. A. H. HART.

Appleton, Wisconsin.

Wax Melting.

It is a great saving to have a good place to collect all scraps of wax, until melting time. I make an article that costs only three or four dollars, that makes a good receptacle. It is made in this way :

Get a piece of tin, zinc or galvanized iron, about 3½ feet long, and 3 feet wide, form it into the shape of a sap trough, put ends in of the same material, and in the bottom an inch hole. Then get 4 panes of glass and make a frame for them like a window sash, and put it over the trough-shaped tin, making it tight so that the bees cannot get in. It is then ready for use. Set it in a sunny place, and put in the comb, and in a short time it will melt and run out at the hole in the bottom. Set one end up about six inches higher than the other.

I put my bees out of the cellar on March 26th. They were in good order. Four were very weak and I expected to loose them. I also lost four others out of 153 swarms. All the bees that were wintered out of doors in this vicinity are dead, so far as I can hear.

Campton, Illinois. R. MILLER.

Campton, Illinois.

R. MILLER.

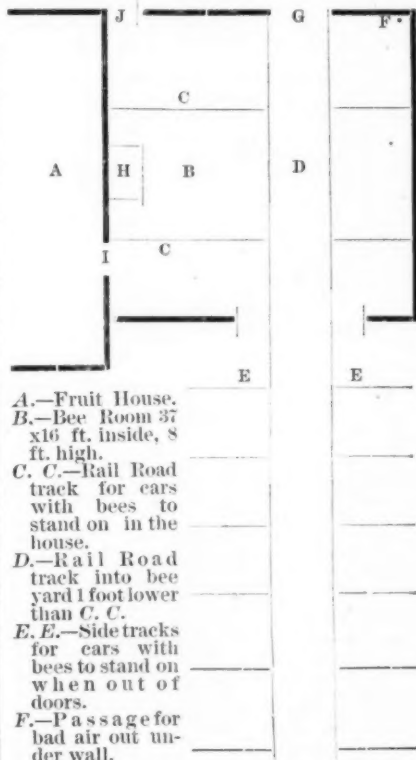
For the American Bee Journal.

Report of my Apiary.

One year ago I had 122 colonies of Italian Bees, in a second story room, 16x19 feet inside, double walls one foot thick, filled with saw-dust; temperature ranged from 39 degrees to 60 degrees. I had on May 1st, 8 colonies, 36 having gone up. I took 70 of the best colonies left, and united them, so as to make 44 colonies. On the 12th of May, moved them (the 44) on spring wagons (3 loads) 17 miles to a large poplar (*Liriodendron tulipifera*) grove, where they gathered 5308 lbs. of honey, taken out with extractor. On June 20th, we took 36 of the 44 colonies 36 to a linden (*Tilia americana*) grove, where they gathered 3259 lbs. of honey, also taken out with extractor. In all, 8567 lbs. of honey. The 16 colonies left at home, we made into 51 nuclei. August 7th, brought the 44 colonies home, built up the nuclei into strong colonies, fed them 1468 lbs. of A. coffee sugar made into syrup, 1 lb. of water to 2 lbs. of sugar, boiled, put nothing else in it. We took the combs all from 8 colonies, fed them syrup, and had 80 combs built by them, 94 1/2 x 16 1/2 inches. Fed one colony 94 1/2 lbs. of sugar; they built 10 full combs; we then ex-

tracted 44¼ lbs. of syrup from the 10 combs, so that the 10 combs cost us \$4.00, with sugar at 12 cts. per lb. We have sold 4563 lbs. of honey for \$1,015.99—\$110.00 for cans, being an average of 19.8 cents per pound.

We have built a room 37x16 feet, 8 feet high inside; wall one foot thick, filled with saw-dust, on the following plan:



A.—Fruit House.

B.—Bee Room 37
x16 ft. inside, 8
ft. high.

C. C.—Rail Road track for cars with bees to stand on in the house.

D.—Rail Road track into bee yard 1 foot lower than C. C.

E. E.—Side tracks for cars with bees to stand on when out of doors.

F.—Passage for
bad air out un-
der wall.

G.—Ventilator for air above the ceiling to come into room at the floor.

H.—Ventilator in ceiling for air to pass out.
I.—Small door into bee room.

J.—Door to give free ventilation at any time when necessary.

I have cars built so that 20 colonies stand on each car, 10 on one side and 10 on the other; fronting 10 east and 10 west, set 1½ inches apart, packed between with buckwheat chaff. When a day comes that the thermometer shows 45 degrees in the shade, we run the cars out of the house to let the bees have a play. We have had them out twice this winter. We have 100 colonies on 5 cars and 13 on another. Can run them all out in twenty minutes. Will let them stand on the cars until about the 12th of May, then move them to poplar grove. The chaff is to keep them warm in the spring, after they are run out of the house permanently, until moved away.

We have the yard in front of the bee-house covered with gravel, so that when a bee gets down on the ground it can get up on a pebble to start on the wing again easily. The yard is south of the house, and is dry and warm.

We will have a stone trough 3x5 feet with bottom covered with pebbles, and a water vessel so arranged that the water in the trough will stand just high enough for the bees to alight on the pebbles and sip the water. Also a zinc pan 3x7 feet, 1½ inches deep, with lath 1x¼ inch, standing on edge, every 3 inches across the bottom of the pan, so that when there is flour one half inch deep in the pan, the bees can get up on the lath to take wing. The trough and pan will be on a car that can be run into the beehouse when the weather is unsuitable, out of doors.

We extracted the honey from the combs four times during the season. Four persons can take the combs out of the hives, extract the honey and put it in barrels, at the rate of 1500 lbs. per day, and put the combs in the hive again easily. Our extractor is one of our own make, and will take 4 combs at a time. The can is stationary. Next year we expect to have the machine arranged so that the honey will run into the barrel as extracted, which will enable us to take out 2,000 lbs. per day. Our hive is the Langstroth Double Story, 20 combs.

P. W. McFATRIDGE & SON.

Carthage, Indiana.

another's stands. But I can't believe it. They will recollect their old stands a long time, and it causes a disturbance among them by having strange bees trying to get into their hives. Besides a great many are killed in entering the wrong hives, as they are taken for robbers. I have the entrance blocks to my hives numbered and a corresponding number on each stand. I carrying my bees out of the cellar, I notice the number on the entrance block and set the hive on its own stand. It is no more trouble or work to set them out right, than it is to set them wrong. "Have a place for everything, and keep everything in its place." I think should be applied to bees as well as any thing else.

J. M. Brooks.

Columbus, Indiana.

New System of Bee-Culture.

"Coe's Apiary" is a Bee-House and Bee-Hives combined. The house is used as a permanent receptacle, or summer and winter stand, for the hives; and is so constructed, that the room containing the hives, is protected on all sides by a series of dead-air spaces. And, being warmed and ventilated by the heat generated by the bees, the air inside may, by the proper adjustment of the ventilating flues, be kept of an even temperature—higher or lower as desired—quite independent of the atmosphere outside.

It is not claimed specially for this system, that it will produce fabulous amounts of honey from individual hives, unnaturally pushed for that purpose. But it is claimed, that it reduces to a practical, well defined method, all our present knowledge in bee-culture; by means of which, an average annual product may be depended upon with as much certainty as in any other branch of industry.

Among the many excellences of this system the chief one perhaps, is, that it possesses in great perfection, all the conditions necessary to wintering bees without loss, with the smallest consumption of honey—combining the desirable features of a summer stand and special winter repository, without the expense, labor, and trouble of either. It is also specially adapted to the necessities of bees during the changeable, windy weather of early spring, when they require a higher and even temperature to facilitate breeding, and when the hives must be frequently opened.

As in winter the temperature of the room may be kept above that of the outside atmosphere, so in summer it may be kept below; thus protecting the bees from severe extremes, both of heat and cold.

Another valuable feature of this system is, that it overcomes entirely that greatest of all objections to bee-culture—the fear of being stung.

The bees adhere more closely to the combs, and are less disturbed, than when a hive is opened in the bright sun-light, and any that do leave the combs fly directly to the window, and not into the face of the operator. Veil and gloves are dispensed with, and visitors may stand by and witness all the manipulations of a hive without the least fear of being stung. For all the operations to be performed in an Apiary; such as, feeding, transferring, making artificial swarms, extracting, placing and removing surplus boxes, introducing queens, queen-

For the American Bee Journal. Bee Items.

I notice in the March No. of the JOURNAL an article on numbering hives. I agree with Mr. Wilson, and think it very necessary that every hive should be numbered, and its stand numbered to correspond, especially if the bees are wintered in doors. I once concluded to change the location of my nucleus hives by setting them out in spring directly on their new stands. They had been in the cellar about four weeks and I thought would not remember their old location. But I soon found out different. The bees, in returning to their hives, all went back to their old stands, and I was compelled to set their hives back again on the old stands. Now if there had been other hives sitting on these nucleus stands, I would surely have lost all my nucleus swarm, as the bees would all have went into the hives that were sitting on their stands, and I should not have noticed it; but as there were none there I noticed the bees flying about hunting for their hives, and I moved them in time to save them.

I raised an Italian Queen in a nucleus, and as soon as she became fertile and laying, I attempted to introduce her to a queenless stock in the farther end of the Apiary. I caged her and waited the usual time, then examined them but they would not accept her. I kept her caged eight or nine days, feeding her every day myself, but they would not receive her. So I concluded to open the cage and let her out on the comb and see what they would do, but instead of that, she took wing and was out of sight in a twinkling. I stood still waiting for her to return to the comb, but she did not come. I gave her up for lost, but thought I would look in her nucleus where she was hatched, and sure enough, I found her imprisoned by the bees, they having sealed queen cells would not receive her. It has been said that it makes no difference in sitting bees out in spring if we do set them on one

breeding, equalizing, &c., this system affords conveniences and facilities so far superior to the out-door system, that it is difficult even to make a comparison.

This mode of bee-culture also commends itself for general use, on account of its cheapness.

The house and fifty hives will cost about one-third less than the same number of good out-door hives. And while the house and hives will last a life-time, the out-door hives must be re-placed by new ones every four or five years.

Also by this system, bee-culture which has been very appropriately termed "the poetry of labor," is brought quite within the sphere of woman's work.

How untiring industry, tender sensibilities, and acute perception, eminently fit her, not only for the duties of this delightful employment, but also for the discovery of means for its more perfect development.

J. S. COE.

Montclair, New Jersey.

For the American Bee Journal. Austin Texas.

I want to describe Austin, Texas, as plainly and concisely as possible, and try to induce some bee-keepers to come and settle among us. Bee-keepers don't know what to expect of Texas, and therefore are afraid to come here.

I don't know how well other places in Texas are adapted to bee-keeping, but I do know that Austin is a first-rate place. I will give you a record of my apiary for 1874.

I began with 30 colonies in the spring, these increased to 64, of which I sold 10 in about the middle of the honey season; this left 54, from these I took after September first, about 3,000 lbs., and could have taken more, had I begun sooner. Altogether though the year I took about 4,000 lbs., besides raising a few queens. All this was done under disadvantages, I being sick every few days for two months in the honey season, and couldn't procure any help. Besides this, I was not in the best location, and we had a drouth of three months when the bees did not gather any more than enough for their own use.

This drouth was unusual; the usual length being only about two months duration.

Bees begin to gather honey about the 8th of February, though they don't store much of it.

If you have empty combs to use, you can begin to extract about the middle of March.

By the last of March, the Italians begin to swarm, though the Blacks seldom swarm before the 10th of April. After the swarming is over, the bees begin to store honey in earnest, and continue to store with little interruption until the middle or last of July, when the drouth sets in, and continues generally six weeks or two months, this is the first honey season.

About the 19th of September, the fall rains set vegetation growing again as in spring, but we gather a larger harvest than we did in the spring and in a shorter time. In many sections, this harvest is almost ruined by the bitter honey gathered from a plant that covers the poor land. This harvest lasts until the frost stops it, about the first or middle of November.

Friends, if any of you are going to move, come to Austin, we have a healthful climate, beautiful country and warm winters.

Don't undertake to bring your bees with you, sell them and pocket the money, come here and buy Black bees and Italianize them. You can buy bees from 50 cents to \$5.00, the price depends upon the locality. Hives will cost from \$2.50 to \$6.00 each.

Come, there is plenty of room.

B. H. IVES.

For the American Bee Journal.

Longevity of Bees.

In the February number of the JOURNAL, Mr. Weatherby enquires about the comparative longevity of the Black and Italian bees. Perhaps the following from my memorandum book, may interest him:

July 13th, 1872.—Selected two medium swarms, one black and one Italian; placed them at considerable distance from my other hives, changed their queens, confined them in cages, and placed them immediately among their new subjects. At this time the combs were well filled with eggs.

July 15th.—Set them both at liberty.

July 19th.—Found both queens laying freely.

Aug. 5th.—Three weeks from the time they commenced laying in their new hives, I found a few young bees leaving their cells.

Aug. 10th.—A very few young bees appeared at the front of each hive, and after flying a short time returned.

Aug. 19th.—A considerable number of young bees appear in front of both hives and seem to be at work, but do not bring in any bee-bread.

Aug. 21st.—The young bees in both hives are very busy, and occasionally one comes home with his legs loaded. After this time they are busy and numerous.

Sixty-one days after, I changed the queens. I examined them very carefully and found but three or four bees belonging to the old stock in each hive, which shows that these bees lived less than forty days after leaving their cells, the first five of which were spent within the hive; and they did not appear to be really at work until about the tenth day.

H.

Will Co., Illinois.

Introducing Queens.

Have your hive made tight, and of thick lumber, to receive the frames of any of your other hives. Have two doors in place of sash or frames, so that you can make the hive any size you wish. When you get your queen, go to some of your strongest hives and get two frames with hatching brood, place them in the center of the hive, with the two doors close to them, which makes a hive of two frames; then put the queen with the bees that come with her in with the two frames of hatching brood, and keep them shut up for two or three days in the parlor or queen house, or any warm place; keep up the warmth by placing bottles of hot water in the empty space on each side. After three days, add a frame of bees, etc., by putting them for 12 hours, on the side, in place of the bottles, and then shake them in front and let them go in; then add the

frames to the other two, and continue till the hive is full. Place them on the third day, on the stand they are to occupy, and allow them to fly, by opening a small hole. Release the queen at once, and there is no danger of her being killed.

We had large quantities of honey dew this year again, and bees have paid well, where they have had attention, and I think Western North Carolina is destined to be one of the greatest honey-producing countries in the world. It is well adapted to the culture of all the fruits and grapes that will grow in the climate of this temperature.

Stock raising is wonderful: it is very healthy, pure air and water, and water power to run almost all the machinery in the United States, if it was applied.

ROBERT T. JONES.

Flat Rock, N. C.

For The American Bee Journal.

Granulated Honey.

In an article in the February No. I think Mr. Dadant in his article on adulterated honey does the bee-keepers of this country a great injustice. I was astonished on reading that article. I had supposed he was better informed on that subject. He says: "It is consequently of the greatest importance that all BEE JOURNALS inform their readers that the best test for honey is the candying; that honey candies because it is formed of grape sugar, which granulates and does not crystalize. That on the other hand sugar syrup is made from cane sugar which does not candy but crystalizes. That if they find on the market from December to June, a so-called honey in liquid condition, they can with absolute certainty declare it a sophisticated honey, or at least a honey which by boiling, or by pure mixture, has lost its character as true and pure article." If Mr. D. had stopped when he said that candying was a good test that the article was not sophisticated, it would have been well enough, but when he asserts that all pure honey granulates before December with an absolute certainty he not only states what is not the fact, but he injures the business of all bee-keepers that wish to put a pure and first class article of extracted honey on the market. Honey will not granulate except through a process of deterioration while the flavor is not injured as much as by boiling, yet it is injured so that it is readily detected in tasting a sample of each. I have had honey two years old, and no more signs of granulation than the day it was extracted. If Mr. Dadant would drop in now at the Patron's Corporation store in Lawrence, he could see some of my honey that was extracted and bottled last June under four linden blossoms, that is as clear as when put up. The fact is, if honey is properly evaporated, it will not granulate for a long time, if at all. The thinnest honey granulates the first, and the best honey is honey that is not granulated, the next best is the granulated and the granulated brought back to the liquid state by heating, is still a little inferior. This of course has reference to honey from a given plant. But if care is taken in heating, the difference is scarcely preceptable. It must be held in water and the vessel that contains the honey must not come in contact with the bottom or sides of

the vessel that holds the water, and the water must be heated very slowly and must not be brought to the boiling point at all and only enough to dissolve the honey. If Kellogg had done that way he could have evaporated his honey without making sorghum of it and without very much injuring its flavor, and if the water is not heated more than 150 degrees, we doubt if it would be possible to detect any injury to the flavor of the honey. But the best way to evaporate honey is in vats or pans made of galvanized iron or tin and the honey put in about 2 inches deep, in this way in the summer time it will evaporate itself without artificial heat, and you will have from the thinnest honey taken out the same day that it is gathered.

Just as thick honey as you choose, you can prepare in that way that will, in many instances keep for years without any show of granulating. Sometimes honey is very thick when gathered. I will say here, that the honey that I had over two years without granulation, was put up as fast as extracted. It was gathered principally from the poly-zonum and buckwheat. What we want in the disposition of our honey, is honest dealers. Another way is for bee-keepers to put their own honey on the market, under their own name. Many are doing that way now, and there is no reason why it could not be more universally practiced.

Lawrence, Kan.

N. CAMERON.

For the American Bee Journal.

My Report.

I have started an apiary, and will show some bee-keepers here, how to keep bees. I think that I can keep more bees than has ever been kept by any one man here yet. Some claim that I cannot run my number higher than 40 or 50 colonies, if I do my best, but I don't believe a word of it. Quite a number in this county have started the bee business, and have a bright looking apiary, of 30 colonies, more or less, but when spring would come, they would have perhaps 10 colonies left to build up again through the summer. This is the way they have done for three or four years, they let their bees go down and then say that there is no money in them. We remarked that they gather honey, and we can get money for that. Yes, but they will die through the winter, they say; but I say there is a reason for your bees all dying. I have handled bees all my lifetime, more or less, and for the three last years I have done but little else.

Bees are wintering very well here, so far. I have 11 of my colonies put up a new way for wintering. I went to the saw-mill and got some slabs, cut short; $3\frac{1}{2}$ feet is about the right length to split up for stakes, and to cover with. I drove 4 stakes around the hive and about a foot from it, leaving the stake about as high as the hive with the cap on; then stuffed straw all around the hive, clear to the top, my bees all stand with the front to the southeast, then covered the hives, straw and all, with the slabs. In one of these hives I have three nuclei, each one having a queen. They were all O. K. when last I saw them.

A word for the Italians; they are the only bees for me. I wouldn't give one good Italian colony for five of the best black bees

I ever saw. The Italians are not so cross as the blacks, and it does not take as much to keep them. You can give the Italians some advice and they will take it, but little advice the black bees will take. They would sooner give you a sting.

D. H. OGDEN.

Wooster, Ohio.

For the American Bee Journal.

How I Wintered.

I have not seen anything for a long time from Mr. Gallup. Perhaps the abuse he has received has disgusted him with the beekeepers. Myself as well as others have been buying the New Idea hive, and am satisfied that in a good location for honey it will give large results. Those who have failed to obtain large surplus have either a bad location or else they do not manage it properly, and if Mr. G. does not furnish the brains to run them, they should not blame him. I made a Gallup hive last spring, four feet long, found it larger than necessary for this place as honey is rather scarce here in town, but it gave me twice as much surplus as any other. Last fall I prepared them to winter on their summer stand according to Mr. G. direction, but I confess I did not have full faith in their wintering well. After we had had two months of the coldest weather known in this climate, I went to the hive to see if there was any of them alive but got no audible sound from them, and concluded they were all dead, gave them no further notice until March 10th, when the thermometer rose to 40 deg. the first time in months, I concluded to open the hive and know the result. Imagine my surprise to find them in the best possible condition: combs bright and clean, not more than half a pint of dead bees, very little of the stores consumed, and four frames containing brood. I could not help giving one good "hurrah for Gallup and the New Idea Hive."

I do not presume to give advice to any one, but for myself I shall winter my bees on their summer stands, in the above named hive, hereafter. I put ten swarms in a frost proof cellar, but none of them wintered so well as the one left out. B. L. TAYLOR.

Minneapolis, Minn.

For the American Bee Journal.

"Bee Lines" from Texas.

"Candid honey, a test of purity and excellence." That's the key-note, Mr. Editor. Sound it so loud, Bro. Dabant, that all beekeepers and adulterators too, shall hear it, and let the latter tremble, we were really glad to see both of you take that stand. For I have long since considered granulated honey the best of all honey. I have been greatly surprised at apiarians making the inquiry how they might prevent their honey from candying, in order to change it back to a liquid state. But my greatest astonishment has been, that honey dealers should reject candied honey as unsaleable. But it is very evident that the dealers wished to get the honey at as low figures as possible, that they might make the larger profits out of it. I hope that all beekeepers will fall into line and make "candied honey" a test of excel-

lence, and head off those honey adulterators.

I will say to Charles Sonne, of Sigel, Illinois, that we are troubled very much with the "Asilus fly." We have at least a half dozen that prey upon our bees, a large brown and 1 1/4 inch long (Promachus), and another 1 inch long, reddish brown with green head. (Dasypoza), and still another 3/4 inches, very much resembling a bumble bee in color. They prey on other insects, and even on each other. I have seen them capture the Dragon fly, much larger than themselves.

The largest sized Dragon fly (Mosquito Hawk), is one of our greatest bee enemies. They hover over our apiaries by the hundreds, and take the unwary bee on the wing, continuing their flight while they devour their victims bodily, or else alighting on some limb near by and take their meals more leisurely. I have written several articles on enemies of the bee, particularly of the "Asilus fly," and I am a little surprised that Mr. Sonne has not read them.

Our winter is pretty severe for Texas, but our bees are wintering well.

Kaufman, Texas. A. H. R. BRYANT.

For the American Bee Journal.

How we Wintered.

The plan of wintering bees, by which we have succeeded in saving every stock, on natural stores, all coming out in splendid condition, no signs of dysentery or bee disease, and with but very few dead bees under the frames, is as follows:

First, remove the cap and boxes, cover the frames with a piece of cotton sheeting, putting a tack in each corner to keep it in place. Then place the hives in a shed, boarded tight to keep out all storms, in rows about three inches apart; then pack straw between and around and on top of the frames, so they will be covered three inches with wheat straw; then lay plank on top, to keep the straw in place or you can put another tier of hives, on them. We prefer wheat straw for several reason: In extreme cold weather, there would a steam or vapor come out of the straw, like a person's breath; in mild weather it could not be seen. That vapor is what killed the bees, *we think*. Our bees had the same chance to get at cider, bug poison, honey dew, &c., as others in our vicinity, and why did they not die. *It was the manner of wintering, we think.*

Several years ago we tried covering half of the hive with straw and the other half empty boxes turned as for storing honey, all covered with cap, with two ventilating holes open in it. In the half of hive covered with straw the combs were wet, and mouldy, and the bees dead; whilst the other half was all right, combs dry, and bees alive, dry and nice. Can it be possible there was different kinds of honey in that half of the hive? No,

it was the difference in the manner of wintering. If the cap had been removed so the air could dry out the straw, we think that half would have been all right. The honey boxes on the other half were the common square boxes, made of white wood. When they got wet, they warped and sprung apart so the moisture escaped into the cap out through the ventilating holes and kept the bees dry.

The only source of danger we can see in our plan of wintering, is the mice. Yet we have had no such difficulty, the past two winters, and this one so far. We shake out all the chaff, so as to leave nothing in the straw to entice the mice or rats to nest in it. BARKER & DICER.

Marshall, Mich.

Foreign Department.

CONDUCTED BY CH. DADANT.

For the American Bee Journal. Historical Notes on Bee-Culture in Auvergne, (France.)

This interesting historical sketch has been translated for Adair's Annals of Bee-Culture, but as Mr. Adair seems to have abandoned the publication of that book we take the liberty to translate it again for the A. B. J.

[TRANSLATOR.]

Among agricultural industries, bee-culture is generally the most neglected branch. It is only the exceptions among our husbandmen who possess a few bee hives. Mysteriously hidden under the shade of the bushy hedges that enclose the small village gardens, they are almost abandoned to their own chance. In the spring, the proprietor deprives his swarms of the fruit of their yearly labor, and then, until the ensuing year, they remain there, forgotten, and almost unprotected. It has not always been so.

Among the Romans, bee-culture was regarded as an important source of income. One of the most essential requirements to obtain the rent of a farm, was to give proof of one's apiarian knowledge. Domestic economy then required a large quantity of honey, not only for the making of confectionery, cakes, artificial wines, but also for the celebration of sacrifices offered to the rural divinities that watched over the gardens, the orchards and the harvests. For such a consumption, the Italian production of honey was not sufficient, and it is not too rash to advance that, among the reasons which induced the Romans to invade Gaul, the quality of the honey that the forests of that country furnished, can be taken into account.

The French have had for bees and their products the same relish as the Romans. The *Sallie Law* contains a whole chapter of regulations on hives and their inhabitants.

The possession of bees was highly prized and each one planned to increase the num-

ber of his colonies. Several means were indicated.

Our country being then much more covered with timber than at the present day contained in its forests a large number of wild swarms, lodged in the trunks of old trees. The lords and monks maintained particular servants called *apiculaires* whose office was carefully to collect those colonies. We could not discover what their process was. The study of the habits of the bee could have pointed out a large number of ways of the utmost simplicity. In South America, for instance, the bee-hunters know very well that a bee detained as prisoner for a few moments will fly to its nest in a straight line without deviating. It is only necessary to catch a few bees, to sprinkle them with dust from the stamens of plants so that the eye can follow them better, and to liberate them one after another, allowing them to start from different points; at the point of intersection of the lines followed by the liberated captives they are sure to find the swarm and the spoils that they covet.

In the month of April when the willows are in bloom, and in the month of May, when the white hawthorn disappears, the *apiculaires* ascending along the brooks, and around the springs, succeeded easily in discovering them, by following the bees that came to water *en foule* and returned back to their hive after having visited the pine and the odoriferous grasses. Then they carefully studied the character of the swarms before removing them, so as to reject the lazy races of bees, for according to the erroneous belief of those people, they would have dishonored the good bees by their bad example.

Several lords, high justices, had alone the right of removing the honey bees from the forests. This right was called, in the feudal language, right of *abeillage*.

In relation to the fugitive swarms, according to the custom in Auvergne, which was consecrated by old usages, he who found them on his estate was compelled to declare them within a week to the lord under whose jurisdiction they had been found. By so doing, he acquired one half of said swarms, the other half belonging to the lord as waifs. In default of this statement, not only the finder was to restore the swarm, but he was condemned to a fine of sixty *sols*, and if he had found the swarm on the land of another, he was moreover condemned to an arbitrary fine. We possess one curious example of the execution of this prescription. *Claude Roux*, of *Pignoles*, parish of *Sistrières*, under the jurisdiction of the justices of *La Chaise Dieu*, had discovered a swarm of bees. He had neglected to declare it, and he refuses to pay the right of waifs, to his lord. By a verdict rendered on the 3d of August 1493 by the bailiiff, *Claude Roux* was condemned to the fine and the restitution of the swarm.

As the first bees were found in the midst of the forests, it seemed at first natural to preserve them in their primitive habitations. They were, therefore, lodged in the trunks of trees; later they were put in baskets, of a conical shape, made of rye straw sowed up with splints of briars or of hazel. Afterwards, hives were manufactured by nailing four boards together closed with a wooden or stone cover. Sometimes also, but rarely, the bees were placed in the very walls of farm dwellings, by preparing cavities which

run through the wall and were closed on each side by disks. Fugitive swarms seem to prefer these lodgings to any others.

In winter these different hives were covered with straw mats. In the XVII century the straw hives with their straw mats cost four or five *sols* each.

The apiaries decreased at an epoch which it would be difficult to determine. Let us say, however, that the extreme cold winters of the seventeenth and eighteenth centuries must have destroyed many, as did the past winter. Besides, the collectors of taxes, contributed greatly to this decrease by their habit of taking the hives, when they could find nothing else in the houses of the poor peasants.

Notes AND Queries

"Will you give us your opinion through the JOURNAL, whether Mr. Dadant or Mr. King is right in the matter of there being black bees in Italy."

AN OLD SUBSCRIBER.

We do not see any disagreement upon this point, between Mr. King and Mr. Dadant. The only point discussed seems to be, what they were carried to Italy for. Mr. King merely says he saw them there, and Mr. Dadant does not deny it. He only says Mr. Hruska had received black bees to experiment on the pathenogenesis, and these stocks or their offspring, were those Mr. King saw. He also offers a reward for the name of any one who has hybrid bees, *unless they were imported there, from outside of Italy.*

It is conceded that black bees and hybrids are there, and are raised there; "black bees and their offspring."

Therefore the point to be discussed seems to be "For what were they brought there."

We do not care about this point. If any of our readers do, we doubt not Mr. Dadant or Mr. King will answer letters willingly.

Are bees likely to remember robbing six months after committing very successful depredations upon each other. How can we prevent their robbing in the spring, before the flowers begin to yield their honey? We have wintered them on their summer stands, in movable frame hives and so far successfully—as a recent examination, made while giving them a "fly" in the house has proven.

MRS. L. B. BAKER.

Lansing, Mich.

We do not think the bees will remember—there will be very few bees left in the colonies, that were there last summer.

Close all the openings to every hive—before they fly this spring, except space for one or two bees at a time to enter.

If they are in proper condition, and each

hive has a fertile queen there will be little danger that they will not defend themselves. Notice our seasonable hints.

I wish you would answer the following questions in the JOURNAL:

1st. Can quilts be used on hives with only $\frac{1}{4}$ to $\frac{3}{4}$ inches space between frame and honey-board? Can same quilts be used on hives when from $\frac{1}{4}$ to $\frac{3}{4}$ inches difference in width or length?

2d. Which is best for quilts, cotton or woolen cloth and how do you make them.

3d. Has C. Muth a patent on his straw mats, and how are they made. I have used mats for year's, made with straw in wooden frames, that leaves a space of about $\frac{1}{4}$ inches between mat and honey-frames for bees to cluster in, which they always do. Don't you think that is an injury to the bees when they are put on late in the fall?

JAS. E. FEHR.

1st. We would remove the honey-board entirely and let the quilt take its place, until very warm weather; then you can put the honey-board on again if you wish. The size of the quilt is not particular— $\frac{1}{2}$ or $\frac{3}{4}$ inch is of little consequence.

2d. We have used both woolen and cotton, and do not see that one is better than the other. If we were making out of new cloth should use cotton, because it is cheapest. Two thicknesses of cloth with cotton batting between them, made the size of the top of hive you wish to use it on, is all that is necessary—quilt it or not, just as you please.

We never heard that Muth claims a patent on his mats. We do not like any quilt or mat that does not lie directly on the frames. We prefer the bees should cluster in the comb.

What is the matter, when bees plant themselves on all sixes at the entrance of the hive, and with hind legs spread out and tail stuck up, they make a noise like a distant spinning wheel, and there seems to be a crack on top of the tails? I thought at first they were robbers, but I watched them, and some of them did it, when loaded with pollen.

MRS. M. B. CHADDOCK.

We think that in this case the bees were not perfectly familiar with their locations, and were a little in doubt if it was safe to enter. Or it may be they discovered bees about. It seems to be a movement of fear and caution.

How is Rye prepared to feed bees? How many frames would you put in a hive. Would you put bees in a hot bed?

W. M. MOORE.

We feed Rye to bees ground, but not bolted. Put it in a shady place near the hives. It is no use to put it on top of the frame. We would put nine 12x12 frames in a common hive; for extra large, non-swarmer hives, twice as many. Let older bee-keepers than yourself try the hot bed.

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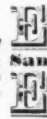
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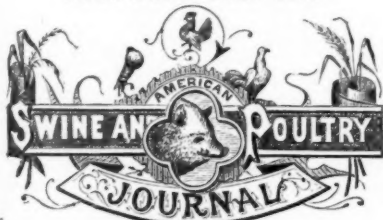
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